

TSUBAKI Product Brochure

V2021JAN



11.1 Tsubaki Drive Chain



11.2 Tsubaki Custom made chain



11.3 Tsubaki Conveyor chain



11.4 Tsubaki Sprockets



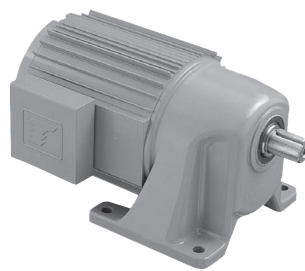
11.5 Tsubaki Powerlock



11.6 Tsubaki Power Cylinder



11.7 Tsubaki Cam Clutch



11.8 Tsubaki Gear Motor



11.9 Tsubaki Gear Motor

Tsubakimoto, a Japanese company was established in 1917. It is a world leader for power transmission products like Roller chains, Sprockets, Powerlocks, Couplings, Cam clutch, Power Cylinder, Gear Motor etc.

Table of contents

11.1 Tsubaki Drive Chain	11.1 - 11.2	11.6 Tsubaki Power Cylinder	11.7
11.1.1 Standard Roller Chain	11.2	11.6.1 Battery Series	11.7
11.1.2 Lube Free Roller Chain (Lambda)	11.2	11.6.2 F Series	11.7
11.1.3 Heavy Duty Roller Chain	11.2	11.6.3 G Series	11.7
11.1.4 Corrosion Resistant Roller Chain	11.2	11.6.4 T Series	11.7
11.1.5 Speciality Roller Chain	11.2	11.6.5 Ultra Heavy Duty Series	11.7
		11.6.6 Multi Series	11.7
11.2 Tsubaki Conveyor Chain	11.3 - 11.4	11.7 Tsubaki Cam Clutch	11.8
11.2.1 Small Size Conveyor Chain	11.3	11.7.1 Backstop Cam Clutch	11.8
11.2.2 Gripper Chain	11.3	11.7.2 Indexing and General Cam Clutch	11.8
11.2.3 Large Size Conveyor Chain	11.4	11.7.3 Overrunning and General Cam Clutch	11.8
11.3 Tsubaki Custom Made Chain	11.4 - 11.5	11.8 Tsubaki Gear Motor	11.9
11.3.1 Free Flow Conveyor Chain	11.4	11.8.1 Parallel Gear Motor	11.9
11.3.2 Bearing Roller Chain	11.5	11.8.2 Right Angle Gear Motor	11.9
		11.8.3 Hypoid Gear Motor	11.9
11.4 Tsubaki Sprockets	11.5	11.9 Tsubaki Couplings	11.10 - 11.11
11.4.1 Pilot Bore Sprocket	11.5	11.9.1 Disk Couplings	11.10
		11.9.2 Rigid Couplings	11.11
		11.9.3 Elastomer Couplings	11.11
		11.9.4 Chain Couplings	11.11
11.5 Tsubaki Powerlock	11.6		
11.5.1 Powerlock Inch Series	11.6		
11.5.2 Powerlock Metric Series	11.6		

11.1 Tsubaki Drive Chain

Tsubaki Drive chain consist of different types such as Standard Roller chain (RS Series chain), Lube free roller chain(LAMB-DA chain, NP Series, KF series,X-Lambda series), Heavy Duty Roller chain(Super Roller chain, Super H-Roller chain, RS-HT chain), Corrosion resistant roller chain(Stainless steel roller chain-SS,NS,AS,LSC series), Surface treated roller chain(N-P,NEP,APP Series),Titanium roller chain, Cold resistant roller chain, Low noise roller chain, Speciality roller chain(RS curved roller chain,Leaf chain).These roller chains are manufactured with World standards:ASME, ISO & JIS in simplex,duplex & triplex form. G8 Series (RS40-RS240) having 1.2 times longer wear life than the old G7 Series.Tsubaki Lambda Chains are having long life that doesn't require lubrication. Hence they are cost effective.Tsubaki Heavy duty roller chains are formed by increasing the thickness and shape of the plates. Hence it has greater transmission capacity, high allowable load, high tensile strength in a compact size.Tsubaki Corrosion resistant roller chains are made of 304 stainless steel (301 stainless steel clips).They offer greater corrosion resistance than RS Roller Chains and RS Surface Treated Roller Chains, and can be used in water and in corrosive atmospheres that are acidic or alkaline, as well as in low or high temperatures.Tsubaki Sprockets are also available for these roller chains as per types of application.



Industries it caters to

- Agriculture :Agri-Tuff Roller chain, RS-HT, Super H Series Heavy duty drive chains
- Steel Industry
- Sugar Industry
- Automobile Industry
- Food Industry: LAMDA Chain for chocolate & confectionary industries
- Cement Industry
- Mining Industry
- Pulp & paper industry
- Port Industry

11.1 Tsubaki Drive Chain (continued)

11.1.1 STANDARD ROLLER CHAIN



Tsubaki's unique processing expertise has given rise to our seamless solid bush. Special lube grooves in our high precision solid bush better retain lubrication, helping double the G7-EX chain wear life.

Selection parameters

Parameters	Min	Max
Pitch	4 mm	88.9
strands	1	6
Temperature range	-10°C	60°C

11.1.2 LUBE FREE ROLLER CHAIN(LAMBDA)



Tsubaki is a pioneer in the industry, being the first to develop a chain that uses special oil-impregnated bushes. Since first being introduced in 1988, Lambda chain has gained an outstanding reputation in variety of industries and applications. It is capable of meeting a wide range of customer needs for long life in a lubrication-free environment, resulting in a reduction in overall long-term costs.

Selection parameters

Parameters	Min	Max
Pitch	9.525 mm	44.45
strands	1	2
Temperature range	-10°C	150°C

11.1.3 HEAVY DUTY ROLLER CHAIN



Tsubaki's Heavy Duty Roller Chains come in a wide array of products. Their high maximum allowable load make them commonly used in compact transmission systems.

Selection parameters

Parameters	Min	Max
Pitch	19.05 mm	76.20 mm
Nstrands	1	3
Temperature range	-10°C	60°C

11.1.4 CORROSION RESISTANT ROLLER CHAIN



Due to Tsubaki's exclusive pin and bush structure, this roller chain has a large sideflex radius thanks to its wide plate-plate clearance. RS sprockets can be used for easy curved drive use.

Selection parameters

Parameters	Min	Max
Pitch	3.4675 mm	76.20 mm
strands	1	2
Temperature range	-10°C	400°C

11.1.5 SPECIALITY ROLLER CHAIN



TSUBAKI Free-Flow Conveyor Chain allows continuous motion and free speed control of objects while also providing the ability to stop and/or accumulate conveyed items at a work station or other functional location.

Selection parameters

Parameters	Min	Max
Pitch	3.4675 mm	76.20 mm
strands	1	2
Temperature range	-10°C	400°C

11.2 Conveyor Chain

Tsubaki small size conveyor chain is most versatile attachment chain. All parts of these chains have been heat treated to achieve higher breakage and fatigue strength.

Industries it caters to

Agriculture :Agri-Tuff Roller chain, RS-HT, Super H Series Heavy duty drive chains
Steel Industry
Sugar Industry
Automobile Industry
Food Industry: LAMDA Chain for chocolate & confectionary industries
Cement Industry
Mining Industry
Pulp & paper industry
Port Industry

11.2.1 SMALL SIZE CONVEYOR CHAIN



Tsubaki's chain with the widest range of applications. All parts are heat treated, resulting in increased tensile and fatigue strength.

Selection parameters

Parameters	Min	Max
Pitch	6.35 mm	101.60 mm
strands	1	1
Temperature range	-10°C	400°C

Tsubaki gripper chain is having reliable clamping mechanisms to ensure precise positioning. High-performance springs are having life cycle more than 10 million cycles, even at high speeds.

11.2.2 GRIPPER CHAIN



Industries it caters to

Food industry
Mrdical industry
Electric industry

Selection parameters

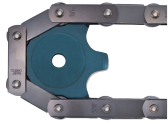
Parameters	Min	Max
Pitch	12.70 mm	15.875 mm
strands	1	1

Tsubaki gripper attachments feature reliable clamping mechanisms to ensure precise positioning. High-performance springs are designed to last more than 10 million cycles, even at high speeds. Our M Type attachment's side-swivel design allows optimal material feed-through to ensure your lines run smoother.

11.2 Conveyor Chain (continued)

Tsubaki Large size conveyor chain can convey products of any shape. It has features like the range of lengths, the direction of transport, and the variety of environments in which it can function. It has more durability and highly efficient and accurate operation without slipping.

11.2.3 LARGE SIZE CONVEYOR CHAIN



Industries it caters to

- Cement industry
- Steel industry
- Food industry
- Automotive industry
- Water treatment

Selection parameters

Parameters	Min	Max
Pitch	75 mm	600 mm
Temperature range	-20°C	400°C

Tsubaki's new SMART Conveyor Chain concept takes a century of chain manufacturing know-how and evolves it to create a conveyor chain that meets the needs of customers today and tomorrow.

11.3 Tsubaki Custom Made Chain

TSUBAKI Free-Flow Conveyor Chain can be used for continuous motion and free speed control of objects while also providing the ability to stop and/or accumulate conveyed items at a work station. It is mostly used in Automobile industries & Food industries.

Industries it caters to

- Agriculture
- Steel Industry
- Sugar Industry
- Automobile Industry
- Food Industry
- Cement Industry
- Mining Industry
- Pulp & paper industry
- Port Industry

11.3.1 FREE FLOW CONVEYOR CHAIN



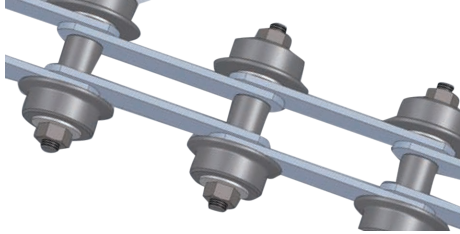
Selection parameters

Parameters	Min	Max
Pitch	175 mm	200 mm
strands	1	1

TSUBAKI Free-Flow Conveyor Chain allows continuous motion and free speed control of objects while also providing the ability to stop and/or accumulate conveyed items at a work station or other functional location.

11.3 Tsubaki Custom Made Chain (continued)

11.3.2 BEARING ROLLER CHAIN



Selection parameters

Parameters	Min	Max
Pitch	8mm	12mm
No of strands	11mm	20mm
Temperature range	985 N	4500 N
Chain allowable speed	2630 N	11300 N

Standard Series Bearing Roller Conveyor Chain features a unique construction of cylindrical bearings between rollers and bushes. (Patented) These rollers have the same dimensions as R and F Rollers on standard RF Conveyor Chain.

11.4 Tsubaki Sprockets

RS Sprockets are strong enough for G7-EX roller chain. While sprocket teeth are subject to wear, and require the same wear resistant qualities as roller chain, Tsubaki is proud to offer sprockets with hardened teeth for the most demanding applications. Tsubaki RS Sprockets are high quality sprockets that have been heat treated in accordance with appropriate



Industries it caters to

- Agriculture
- Steel Industry
- Sugar Industry
- Automobile Industry
- Food Industry
- Cement Industry
- Mining Industry
- Pulp & paper industry
- Port Industry

Tsubaki RS sprockets are widely used high quality sprockets which are heat treated with appropriate quality standards. Different types of Tsubaki sprockets are RS sprockets, 2A type RS sprockets, Single dual type sprocket, BS/DIN Roller chain sprockets, Corrosion resistant series, Speciality sprockets.

Selection parameters

Parameters	Min	Max
Pitch	4.7625 mm	488.9 mm
No of teeth	9	75
bore	4 mm	170 mm

11.5 Tsubaki Powerlock

Tsubaki locking assemblies or powerlocks are friction type locking device can be used for easy, strong, and secure connections between shafts and hubs without backlash. They are available with Inch as well as metric series. Different series are KE Series, AS series, AD-N series, AE Series, TF Series, RE Series, ML Series, SL Series, EL Series & EF Series etc Tsubaki locking assemblies or powerlocks are also available with Pulleys/Sprockets such as S type lock pulleys, N type lock pulleys, C type lock pulleys, Lock series RS Sprocket etc.



Industries it caters to

- Agriculture
- Steel Industry
- Sugar Industry
- Automobile Industry
- Food Industry
- Cement Industry
- Mining Industry
- Pulp & paper industry
- Port Industry

11.5.1 POWERLOCK INCH SERIES



11.5.2 POWERLOCK METRIC SERIES



Selection parameters

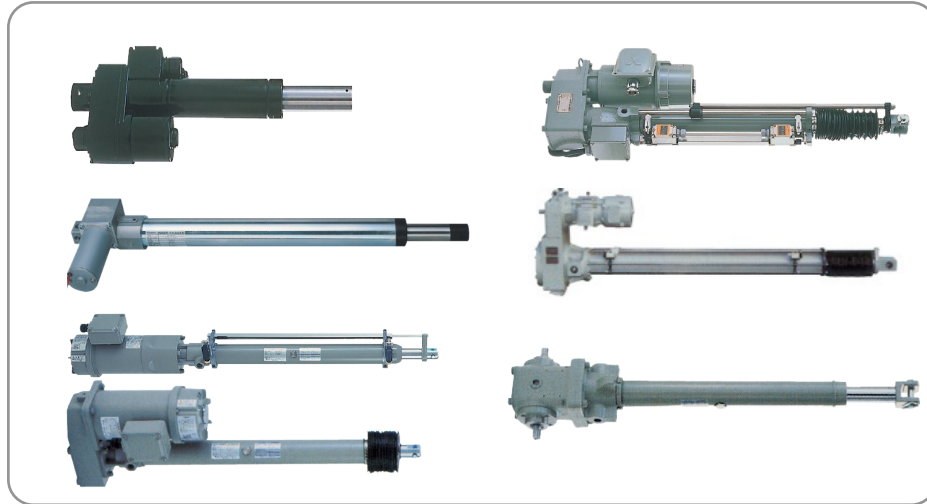
Parameters	Min	Max
Inner diameter	0.375 inch	1211.8125 inch
Outer diameter	0.9375 inch	14.7620 inch
Transmittable torque	22 ft.lbs	316453 ft.lbs
Transmittable thrust	1340 lbs	642928 lbs

Selection parameters

Parameters	Min	Max
Inner diameter	5 mm	300 mm
Outer diameter	18 mm	375 mm
Transmittable torque	4 ft.lbs	316413 ft.lbs
Transmittable thrust	425 lbs	642928 lbs

11.6 Tsubaki Power Cylinder

Tsubaki Power cylinder are available in different series such as Battery series, F series, G series, T series, Ultra heavy duty series, Multi series.



Industries it caters to

- Agriculture
- Industrial equipment
- Medical equipment
- Material handling equipment
- recreational equipment

11.6.1 BATTERY SERIES



Selection parameters

Parameters	Min	Max
Thrust	98 N	1470 N
Speed 50/60 Hz	15 mm/sec	50 mm/sec
Stroke	50 mm	200 mm

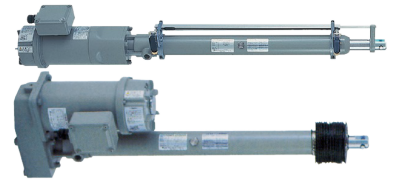
11.6.2 F SERIES



Selection parameters

Parameters	Min	Max
Thrust	98 N	392 N
Speed 50/60 Hz	15 mm/sec	54 mm/sec
Stroke	50 mm	300 mm

11.6.3 G SERIES



Selection parameters

Parameters	Min	Max
SThrust	700 N	3000 N
Speed 50/60 Hz	9 mm/sec	240 mm/sec
Stroke	150 mm	1200 mm

11.6.4 T SERIES



Selection parameters

Parameters	Min	Max
Thrust	2450 N	314000 N
Speed 50/60 Hz	6.3 mm/sec	120 mm/sec
Stroke	200 mm	2000 mm

11.6.5 ULTRA HEAVY DUTY SERIES



Selection parameters

Parameters	Min	Max
Thrust	617000 N	1230000 N
Speed 50/60 Hz	7.5 mm/sec	18 mm/sec
Stroke	1200 mm	3000 mm

11.6.6 MULTI SERIES



Selection parameters

Parameters	Min	Max
Thrust	4900 N	1314000 N
Stroke	200 mm	2000 mm

11.7 Tsubaki Cam Clutch

Tsubaki Cam clutch have different types depending on the application such as Backstop cam clutch, Indexing cam clutch, Overrunning cam clutch. Tsubaki Backstop cam clutch is available in series such as BS/BS-HS series, BSEU series, BR-HT series, BREU series. Tsubaki Indexing cam clutch is available in series such as MIUS series, MZEU series, MZ series. Tsubaki overrunning cam clutch is available in series such as BB, TSS, TFS, MGUS/MGUS-R, BUS200, PBUS, OB-ON/OF, OB-SF series.



Industries it caters to

- Air cleaning plants
- Agricultural machines
- Conveyors
- Packaging machinery
- Printing machinery
- Wire winding machines
- Textile looms
- Speed reducers
- Cranes & Hoists

11.7.1 BACKSTOP CAM CLUTCH

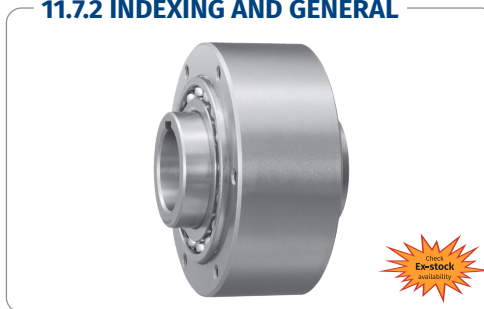


Selection parameters

Parameters	Min	Max
Screw Diameter	4mm	100mm
Lead	0.5mm	20mm
Dynamic Load	170 N	136000 N
Static Load	280 N	526000 N

Over the last 50 years, Tsubaki engineers have spent thousands of man hours designing and improving unidirectional/mechanical clutches in an effort to improve reliability and performance. Innovative designs and features incorporated into our cam clutches assure efficient and dependable operation in the harshest environments.

11.7.2 INDEXING AND GENERAL



Selection parameters

Parameters	Min	Max
Screw Diameter	12mm	50mm
Lead	16mm	50mm
Dynamic Load	2690 N	90800 N
Static Load	4420 N	270000 N

Over the last 50 years, Tsubaki engineers have spent thousands of man hours designing and improving unidirectional/mechanical clutches in an effort to improve reliability and performance. Innovative designs and features incorporated into our cam clutches assure efficient and dependable operation in the harshest environments.

11.7.3 OVERRUNNING AND GENERAL CAM CLUTCH CAM CLUTCH



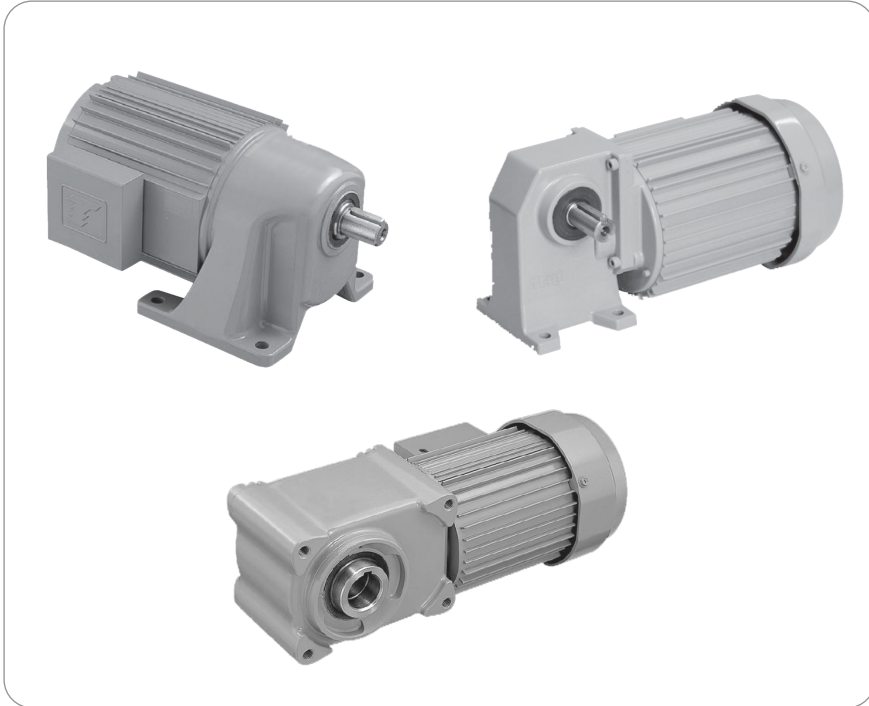
Selection parameters

Parameters	Min	Max
Screw Diameter	12mm	50mm
Lead	16mm	50mm
Dynamic Load	2690 N	90800 N
Static Load	4420 N	270000 N

Over the last 50 years, Tsubaki engineers have spent thousands of man hours designing and improving unidirectional/mechanical clutches in an effort to improve reliability and performance. Innovative designs and features incorporated into our cam clutches assure efficient and dependable operation in the harshest environments.

11.8 Tsubaki Gear Motor

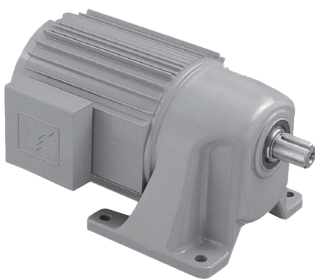
Tsubaki Gear Motor consist of diffrent type such as Parallel gear motor, Right angle gear motor & Hypoid gear motor. Different series are Gear Motor TA series(Motor power 0.1 kW-5.5 kW), HYPOID Motor TA series(Motor power 0.1 kW-5.5 kW), Croise motor CSMA.HCMA (Motor power 0.1 kW-5.5 kW), GEAR MOTOR mini series(Motor power 40W-90W), HYPOID motor mini series(Motor power 40W-90W).



Industries it caters to

- Agriculture
- Steel Industry
- Sugar Industry
- 4Automobile Industry
- Food Industry
- Cement Industry
- Mining Industry
- Pulp & paper industry
- Port Industry

11.8.1 PARALLEL GEAR MOTOR

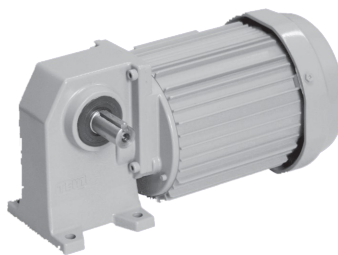


A 3 gear solution attained for functions-quality-performance of Tsubaki gear motors in corporation with extensive know-how and advanced technology. The appropriate gear can be selected according to the usage.

Selection parameters

Parameters	Min	Max
Motor power	40 W	5.5 KW
Reduction ratio	1/5	1/1200

11.8.2 RIGHT ANGLE GEAR MOTOR



A 3 gear solution attained for functions-quality-performance of Tsubaki gear motors in corporation with extensive know-how and advanced technology. The appropriate gear can be selected according to the usage.

Selection parameters

Parameters	Min	Max
Motor power	0.1 KW	5.5 KW
Reduction ratio	1/10	1/300

11.8.3 HYPOID GEAR MOTOR



Tsubaki emerson has developed this new type of right anglr reducer which was devised in the USA and produced in Japan.Offering excellent starting and operat-

Selection parameters

Parameters	Min	Max
Motor power	0.1 KW	5.5 KW
Reduction ratio	1/5	1/1200

11.9 Tsubaki Couplings

Tsubaki Couplings are having wide range of products such as Disk couplings, Rigid couplings, Elastomer couplings & Chain Couplings. Tsubaki Disk couplings consist of Echt flex couplings (NER, NEF, NEH, NES series) and Power rigid coupling (EPR series). Tsubaki Elastomer couplings consist of LN series Jaw flex couplings (LN), Jaw flex couplings sintered hub (L), Jaw flex couplings Aluminium hub (L-A). Tsubaki chain couplings consist of Roller chain couplings (CR), Stainless steel roller chain couplings (CR-SS), NYLON chain couplings (CN).

These couplings are widely used due to its properties such as High torsional stiffness, cost effective, low moment of inertia, faster centering & mounting, suitable for high speed operation etc.



Industries it caters to

Stage Equipment: NER/NEF series, Echt Flex couplings

Elevator type parking systems: NER/NEF/NEH series, Echt Flex couplings

NC Lathe X & Z axis: NEF series Echt Flex coupling, EPR series power rigid coupling,

Machining center spindles: LN series Jaw flex coupling, NES series Echt flex coupling

Industrial color printers & Single Axis Robots: NES series, Echt flex coupling

11.9.1 DISK COUPLINGS



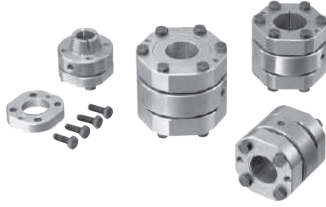
Selection parameters

Parameters	Min	Max
Bore	4 mm	289 mm
Torque range	0.7 Nm	176400 Nm

Greatly increased torque relative to previous series enables smaller sizes. The disks and spacers have been structured as a single unit (center unit), eliminating on-site disk assemble work after centering. Can be installed/removed just by the bolts between the center unit and hubs

11.9 Tsubaki Couplings (continued)

11.9.2 RIGID COUPLINGS



Selection parameters

Parameters	Min	Max
Bore	16 mm	35 mm
Torque range	78 Nm	489 Nm

Tsubaki's Power Rigid® Couplings are rigid couplings for machine tools. They use a Taper-Lock structure to achieve highly reliable coupling. To satisfy today's wide range of user demands for faster, more precise and lower-cost machine tools, they provide high torsional stiffness, low moment of inertia and low cost. The couplings can be mounted from either side, enabling faster centering and mounting.

11.9.3 ELASTOMER COUPLINGS



Selection parameters

Parameters	Min	Max
Bore	5 mm	69 mm
Torque range	0.4 Nm	711 Nm

The LN Series of Jaw-Flex Couplings have spiders made of a new material that provides outstanding vibration damping characteristics not found in conventional products. In addition to the clamp type, the lineup also includes a Taper-Lock type suited to high-speed operation.

11.9.4 CHAIN COUPLINGS



Selection parameters

Parameters	Min	Max
Bore	16 mm	700 mm
Torque range	78 Nm	717000 Nm

The body is composed of two custom sprockets with hardened teeth and a custom two-strand roller chain. The custom parts provided with the body are a joint pin, and a clip or cotter pin. All the custom parts are also sold individually.